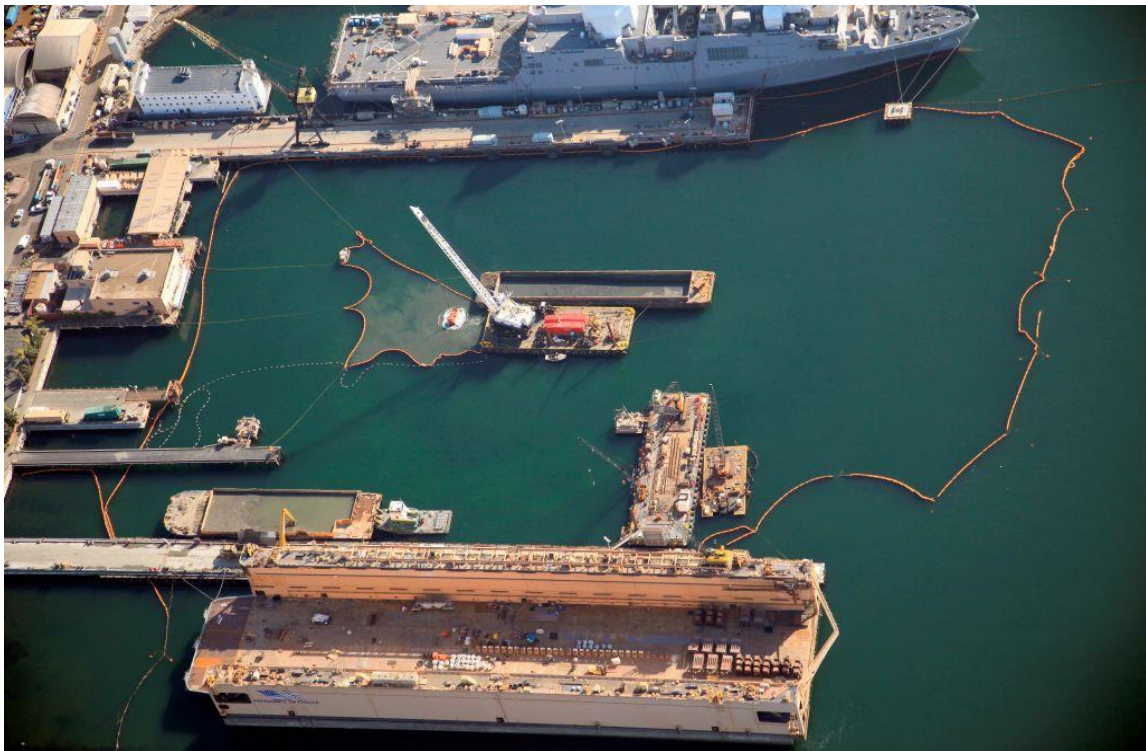




R.E. Staite Engineering



Health and Safety Plan

San Diego Shipyard Sediment Site – South Shipyard

Cleanup and Abatement Order No. R9-2012-0024

**Prepared by
R.E. Staite Engineering
2145 E. Belt St
San Diego, California 92113**

**R.E. Staite Engineering
San Diego Shipyard Sediment Site – South Shipyard
Site-Specific Health and Safety Plan
TABLE OF CONTENTS**

I. PLAN PREPARATION AND APPROVAL.....	4
II. PROJECT BACKGROUND INFORMATION.....	5
III. SITE SPECIFIC HEALTH AND SAFETY PLAN	7
A. SAFETY AND HEALTH POLICY:.....	7
B. RESPONSIBILITY:.....	8
C. INDOCTRINATION:	11
D. EDUCATION:.....	11
E. ENFORCEMENT:.....	12
F. FIRE PREVENTION:	12
G. EQUIPMENT INSPECTION AND MAINTENANCE:.....	13
H. LAND EXCAVATION:	14
I. HAZARDOUS MATERIALS:	14
J. OTHER SAFETY ITEMS:	15
K. DAILY SAFETY INSPECTIONS:	19
L. COMMUNICATIONS:.....	19
M. COMPLIANCE WITH SAFETY REQUIREMENTS:	19
N. DIVE PLAN:	19
O. PROFESSIONAL RESPONSE CONTACTS:	20
P. ACTIVITY HAZARD ANALYSIS PLAN	20
Q. SUBCONTRACTORS:.....	20
R. SITE SAFETY AND HEALTH OFFICERS (SSHO):	20
IV. HAZARD COMMUNICATIONS PROCEDURE / PLAN.....	20
A. GENERAL INFORMATION	21
B. CONTAINER LABELING POLICY	21
C. MATERIAL SAFETY DATA SHEETS	21
D. EMPLOYEE TRAINING AND INFORMATION.....	22
E. HAZARDOUS NON-ROUTINE TASKS.....	23
F. OUTSIDE CONTRACTORS	23

G.	CHEMICALS IN UNLABELED PIPES.....	23
H.	CHEMICAL RELEASE EMERGENCY RESPONSE GUIDELINES.....	24
I.	EMERGENCY STATION DRILL - ABANDON SHIP PLAN / MAN OVERBOARD	24
V.	HAZARDOUS MATERIAL SPILL RESPONSE PLAN	26
VI.	CONFINED SPACE OPERATING PROCEDURES / PLAN.....	28

I. PLAN PREPARATION AND APPROVAL

San Diego Shipyard Sediment Site

San Diego, California

Project No. 120981-01.01

Section 013529 – Health, Safety, and Emergency Response Procedures

Paragraph 1.02B Site-Specific Health and Safety Plan

A. Plan Preparer

_____ Date _____

(619) 233 - 0178

Chad Carpenter

R. E. Staite Engineering, Inc.

B. Plan Approval

_____ Date _____

(619) 233 - 0178

Katha Carpenter

R. E. Staite Engineering, Inc. Vice President

C. Plan Concurrence

_____ Date _____

(619) 233 - 0178

Ross McDonald

R. E. Staite Engineering, Inc. CQC Manager

II. PROJECT BACKGROUND INFORMATION

Contractor: R. E. Staite Engineering, Inc.
2145 East Belt Street
San Diego, California 92113

Project Name: San Diego Shipyard Sediment Site

Contract Number: 120981-01.01

Project Description: Clean-up and abatement of the San Diego shipyard sediment site (south shipyard) by means of removing debris, dredging, and sand covering. The RES Health and Safety Plan or HASP supersedes all other safety programs as it pertains to contractor performance. All work onsite is considered non-hazardous. In the event that Hazardous conditions are discovered the RES HASP will be amended to address hazard(s).

Closest Hospital: Sharp Coronado Hospital

250 Prospect Place
Coronado, CA 92118
619-522-3600

Hospital Route Map and Driving Directions

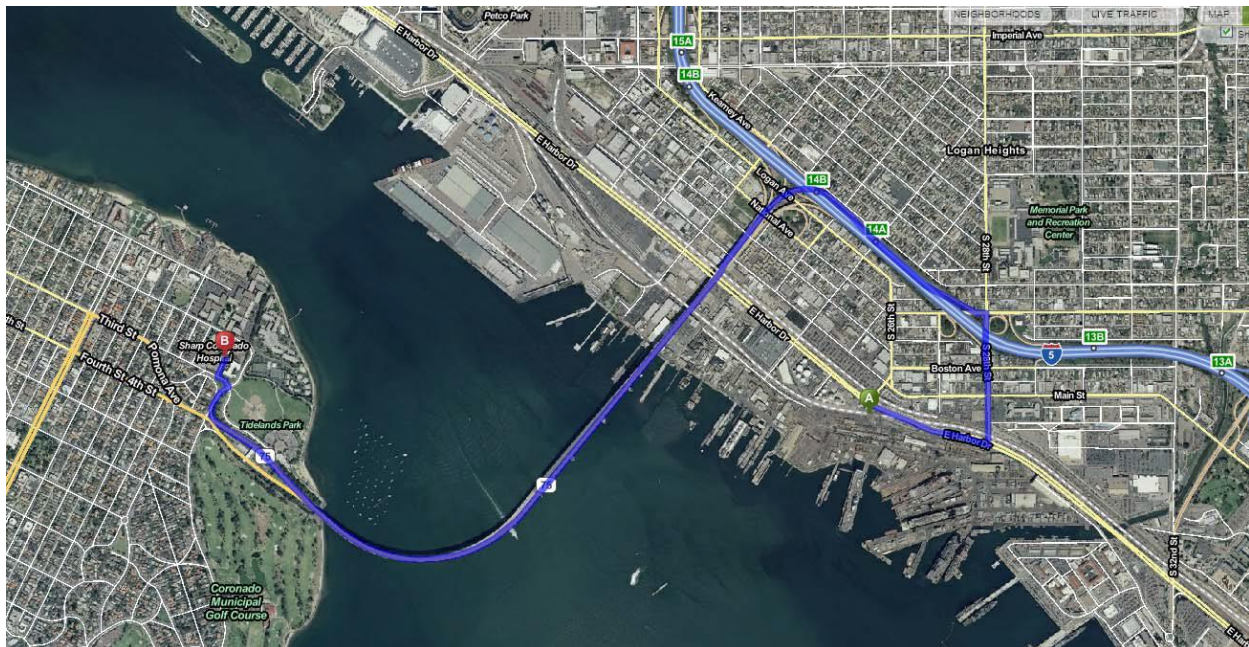


Figure - Hospital Route Map

1. Start out at Point A, going east on E Harbor Drive toward S 28th Street (0.3 miles).
2. Take the first left onto S 28th Street (0.7 miles).
3. Turn left onto National Avenue (0.7 miles).
4. Merge onto I-5 N (1.0 miles).
5. Merge onto CA-75 S via EXIT 14A toward Coronado (3.3 miles).
6. Turn slight right onto Glorietta Boulevard (3.5 miles).
7. Turn left onto 3rd Street / Third Street (3.5 miles).
8. Take the first right onto Prospect Place (3.6 miles).
9. Arrive at Point B, 250 Prospect Place, on the left.

EMERGENCY CONTACT NUMBERS

Ambulance: 911

Fire: 911

Police: 911

Poison Control: 1-800-222-1212

National Response Center: 1-800-424-8802

Emergency Response System: 1-858-565-3490
(San Diego County Office of Emergency Services)

EPA Environmental Response Team: 1-201-321-6600

III. SITE SPECIFIC HEALTH AND SAFETY PLAN

The following is submitted as our site-specific Health and Safety Plan (HASP) for the persons in our employ in the performance of this contract. We shall take such additional measures as the Trust or his authorized representative may determine to be necessary in the performance of this work.

We shall report all accidents that occur at the site of work under this contract, as Federal and State Laws direct, to the Trust's Representative at the job site, and shall also furnish copies of reports of accidents to the Trust.

Our Health and Safety Program (HASP) is based on a review of Section 013529 of the Contract Specifications. It is our intention to comply with all regulations in this manual. Its application to the contract is as follows:

A. SAFETY AND HEALTH POLICY:

It has been and shall continue to be our policy to provide a safe work environment for our employees. The company will take all necessary steps to prevent injury to our employees, employees of the owner, subcontractors, or job site visitors.

The most important and effective person to eliminate and reduce injuries is the employee. Their help is needed to eliminate unsafe work conditions and practices, which cause injuries. We strongly encourage our employees to report any unsafe work conditions and practices to their immediate supervisor for corrective action.

Our Site Safety and Health Officer (SSHO), Mike Johnson, has the authority and the responsibility to ensure the implementation of our Safety and Health program.

Because safety directly benefits both the employer and the employee, it is necessary for all of our employees to give their constant attention to accident prevention.

Safety is everyone's responsibility.

Report all safety violations or concerns to your supervisor, who shall record the issues on the daily dredge log and report to the SSHO and Superintendent. All recorded safety concerns and violations will be recorded on the RMS system for further tracking by the CQC.

B. RESPONSIBILITY:

The responsibility for our accident prevention plan is assigned to the SSHO who will have the field responsibility for administering, enforcing and carrying out the program.

Mr. Mike Johnson – Site Safety and Health Officer

1. The SSHO is responsible for enforcing and implementing the Safety and Health Program in accordance with the accepted HASP. All safety concerns shall be noted on the daily log by the SSHO and reported to the Project CQC Manager. All safety deficiencies shall be corrected as soon as possible.
2. Conduct monthly safety meetings with supervisory personnel. The meetings will consist of discussions of safety regulations, ways and means of correcting existing hazards, methods by which accidents may be prevented, and make a periodic review of the entire project.

He will participate in special safety meetings on the job site with the Trust prior to start of work on the contract or on any new phase of construction to assure that specific additional hazards which may not be incorporated in this program are anticipated and proper advance precautions taken.

The information gained from these meetings will be passed on to the workmen at "Tool Box" safety meetings, which will be held weekly for each shift during shift changes. Reports of weekly safety meetings with subjects discussed and attendance roster will be prepared for each meeting and a copy furnished to the Trust together with that day's Daily QC Report.

A Man-Overboard drill shall be performed at the beginning of the job and once every month for the duration of the project. Additional nighttime drills shall be conducted if work will be performed at night. The Project SSHO shall notify to Trust 48 hours prior to any man-overboard drill.

3. Arrange for providing the following services and or equipment:
 - a. First Aid Kits at strategic locations on the job site and on the major pieces of equipment. Kits will be inspected periodically to ascertain that supplies are complete.
 - b. All supervisors will know medical aid arrangements, including ambulance services. The telephone numbers of

medical and ambulance facilities and emergency instructions will be posted on the bulletin boards on the dredge and barges and at the project office.

- c. All necessary safety guards such as shields and G.F.I. on power tools and equipment will be enforced.
- d. Protective devices such as safety glasses, hard hats, gloves, etc., will be furnished and their use enforced.
- e. Employees shall wear suitable clothing; the minimum shall be short-sleeved shirt, long trousers, and Safety toe boots.
- f. Installation of safety signs on the Dredge, SMA and Mixing site will be appropriate to hazards associated with work, such as "Caution Hard Hat Area" on the dredge or "5 MPH" signs in the SMA for the trucks to obey.
- g. Adequate lighting with shield where required for safe, efficient work.
- h. Ring buoys, water lights, and safety skiff.
- i. Adequate barricades and warning signs.
- j. Fire extinguishers or equivalent at strategic location on the job site and on each major piece of equipment. Extinguishers will be inspected monthly.
- k. Diving is strictly prohibited without a Dive Plan that has been accepted by the Trust.
- l. Display signal lights in accordance with Coast Guard regulations.
- m. Welding, burning, and grinding operations will be conducted by properly trained individuals with proper protective equipment.
- n. Safety belts and lanyards (minimum of 1/2-inch nylon, or equivalent, with maximum lengths of six feet) will be used at unguarded locations at elevations, where applicable. Periodic inspections of safety belts and lanyards will be conducted to ensure the condition of each piece of equipment.

- o. All people employed on the floating plant are required to wear adequate clothing, hard hats and PFD's while performing their duties. Strobe lights are required on all PFD's during night work.
All Visitors are required to wear proper clothing and PPE and sign in on the Visitor's Log prior to boarding the dredge.
 - p. A Visitors Log must be maintained on the dredge for the duration of the project.
 - q. At least one skiff, fully equipped, will be immediately available for use when needed.
 - r. Other operations involving personal protective apparel and safety equipment will comply with the regulations contained in this section.
 - s. Only NIOSH or approved respiratory equipment shall be used.
 - t. Confined Space Operating Procedures is attached. Any confined space entry must follow the procedures specified.
- 4. Conduct daily inspections and maintain a written log to determine if safety hazards exist and if supervisory personnel are carrying the program to the workmen. The log will include area of operation inspected, date of inspection, identified hazards, recommended corrective actions, estimated and actual dates of corrections. These inspections will be accomplished with an Trust representative on the job if so desired.
- 5. Investigate, prepare and sign reports of any accident which may occur and arrange for corrective action to insure against further occurrence of similar accidents.
- 6. A Monthly Record of Work-Related Injuries/Illness & Exposure Log will be submitted each month to the Trust.
- 7. A First Aid Log will be kept and maintained by the SSHO.
- 8. Maintain a safety and health deficiency tracking system that monitors outstanding deficiencies until resolution. Post a list of unresolved safety and health deficiencies on the safety bulletin board.

9. Immediately notify the Trust at the job site of any accident on the project involving the public, Contractor will follow up with written reports as are necessary, using Accident Investigation Reporting Guide.

C. INDOCTRINATION:

The importance of safety will be emphasized to each new employee as follows:

1. All new employees will be instructed in the use of safety devices and the procedures to follow in case of accidents and the Company's safety policy will be explained. The employee's immediate supervisor will be responsible for instructing the individual in the proper and safe way to do the work assigned to them, pointing out the hazards involved.
2. Subcontractors will be oriented regarding the provisions of the Project Safety Program prior to starting work. All subcontractors will be provided with a copy of our Safety and Health Manual, and our Accident Prevention Plan for the project. Any subcontractor(s) or supplier who violates our project safety policy will be given an initial warning of a violation in writing. If corrective action is not taken, the subcontractor(s) or supplier will be removed from the project site until the owner has given his approval for the subcontractor(s) or supplier to return.
3. Training for Trust representative
4. Training for visitors

D. EDUCATION:

The education phase will be accomplished by the following:

1. Supervisory safety meetings will be held regularly as well as reviews and updating of the Hazard Analysis.
2. Tool Box meeting will be held weekly and a record of such maintained.
3. Posters, messages and other safety information will be posted in a conspicuous location.
4. A "man-overboard" procedure will be established and a drill will be held soon after the start of the project. Drills will be held periodically thereafter on an unannounced basis. Man overboard drills will be conducted for day and night shift crews. The Project Safety Manager will notify the Trust 48-hours prior to any man-overboard drill.

5. Employees holding valid first aid training certificates and CPR will be working on each shift. A copy of the latest CPR/First Aid Class sign-in sheet is attached.
6. Copies of the RES IIPP and project HASP shall be readily available to all supervisory personnel and placed aboard the dredge for ready reference.

E. ENFORCEMENT:

The consequences of safety violations:

1. Workmen who continually or willfully violate safe working practices will be subject to dismissal. The workmen's supervisor will be held responsible for seeing that such individuals are not allowed to continue endangering themselves and or others.
2. The Project Manager will take disciplinary action at his discretion against supervisory personnel who fail to carry out the safety program. Any indifference to the safety program or safety operations by any employee will not be tolerated.
3. Drinking of alcoholic beverages or use of drugs will not be tolerated on the job site. Any employee "under the influence" will not be permitted on the job site.
4. All employees are subject to R.E. Staite Engineering's Drug Free Work place policy.

F. FIRE PREVENTION:

The following program will be implemented:

1. Proper storage will be provided for all inflammable materials.
2. Oxygen and acetylene will be stored separately and secured in an upright position and reverse flow check valves will be used between torch and hose.
3. No burning of any debris will be permitted. Debris and trash will be disposed of in the appropriate containers or trash dumpsters.

4. The job site and equipment will be maintained in a neat, orderly fashion and any debris that may constitute a fire hazard or nuisance will be removed for prompt and proper disposal.
5. Fire fighting equipment will be provided at proper location and personnel instructed in its proper use. Fire fighting stations and duties will be established and monthly fire fighting drills will be conducted, logged and reported for all shifts.
6. All fueling stations and other combustible storage areas will be designated "NO SMOKING OR OPEN FLAMES WITHIN 15 FT".
7. Station Bill will be posted in the galley of the dredge. All crewmembers shall read and understand the procedures posted as well as their responsibilities in the event of an emergency.

G. EQUIPMENT INSPECTION AND MAINTENANCE:

Preventive measures to insure safety:

1. It is our policy to maintain equipment in proper operating condition at all times.
2. Equipment will be inspected at regularly scheduled intervals and deficiencies reported immediately and corrections made before the equipment is put back in operation. A log of equipment inspections will be maintained.
3. Barges for barge mounted cranes shall be of sufficient size to properly accommodate cranes to be used and attendant plant shall be of sufficient capability to properly control movements of all barges at all times. Cranes will be inspected annually and copies of the certificate available on the dredge. Load-Limit charts will be posted in the operators cab.
4. All pressure vessels will be inspected, tested and properly certified.
5. Reverse signal alarms, roll bars and seat belts will be installed on construction equipment as required.
6. All persons employed throughout the course of the work shall be physically qualified for performing the duties to which they are assigned.
7. A Pre-mobilization inspection of equipment shall be made prior to work start-up in the presence of the Trust's representative. If any additional equipment is moved onto the job site at any time, an inspection shall be

made and the required forms completed. All required corrections identified by the Trust's representative shall be recorded on the Floating Plant Inspection Checklist and corrections made immediately. All actions taken will be recorded on the Daily QC report and submitted to the Trust.

H. LAND EXCAVATION:

Underground Service Alert (U.S.A.) is to be called at 1-800-432-4770, two working days before any digging is to be done on landside locations.

I. HAZARDOUS MATERIALS:

A Material Safety Data Sheet (M.S.D.S.) will be on-site for all hazardous materials used for this project. The M.S.D.S. will be used as a source of information at safety meetings, and as a reference for the following items:

1. **First Aid**
2. **Required personal protective equipment**
3. **Proper storage**
 1. All petroleum products will be stored in clean, well marked containers of good repair that meet O.S.H.A. standards. Flammables will be marked flammable and stored separate from any oxidizers such as cutting oxygen.
4. **Proper disposal.**
 1. All waste oil or other contaminated petroleum products will be put into well marked drums and delivered to the project yard collection site for the next scheduled recycle pickup.
5. **Emergency procedures for spills.**
 - a. All oil spills will be contained and mopped up immediately. Disposal should be hauled as waste oil (see D.1. above).
 - b. All oil spills over water must also be reported to the U.S. Coast Guard as soon as possible.

- c. The Dredge Captain or Operator must immediately alert the Project Manager and Safety Manager of any spills. The Project Manager or Safety Manager will notify an oil spill clean-up contractor.
 - d. R.E. Staite Engineering's Hazardous Material Spill Response Plan is attached at the back of this Safety Plan.
6. **Hazardous materials** delivered to the job site by suppliers such as fuel, oil, paint, etc. will be labeled accordingly. Personnel will be instructed in the proper handling, usage and storage of hazardous materials. MSDS safety sheets for hazardous materials will be maintained on the project site and provided to NASSCO.
7. **Emergency Procedures for Ruptured Utilities:**
- When the operator suspects he may have ruptured an underwater pipeline or other utility crossing the site, all equipment must shut down and the Project Manager, Project Superintendent, CQC and SSHO Manager must be notified immediately. Upon notification of rupture Project management team must notify affected utility company immediately

J. OTHER SAFETY ITEMS:

1. **Accident Planning**

For recordable injuries and illnesses, and property damage accidents resulting in at least \$2000 in damages, the contractor will conduct an investigation to determine the cause and complete an Accident Report for submittal within 24 hours.

The Trust shall be notified within 4 hours of any recordable injuries and illnesses or property damage.

Except for rescue and emergency measures, the accident site will be left undisturbed until released by the investigating GDA.

OSHA will also be notified of any serious injury per Chapter 3.2. of the California Occupational Safety and Health Regulations (CAL/OSHA).

Daily records of all first-aid treatments not otherwise reportable will be maintained on the dredge and furnished to the Trust upon request.

A Monthly Record of Work Related Injuries/Illnesses & Exposure Log will be prepared and submitted to the Trust each month.

2. Emergency Plan

All supervisors will be aware of existing plans to be utilized in case of emergency. Emergency telephone numbers will be posted at designated locations. An emergency action plan and fire-fighting plan will be written and posted aboard the dredge. At least two employees on each shift shall be certified to administer first aid and CPR.

A skiff, crewboat or towboat will be available to evacuate employees from the dredge to shore. In an emergency, dredging operations will stop so that all personnel, except the injured employee, are available to assist in first aid, CPR, rescue or evacuation of people. Only certified personnel will administer the medical attention the injured employee may require.

First Aid kits will be located in the jobsite trailer, aboard the dredge inside the tub house and the operator's cab, pilot house and engine room of each towboat or crewboat, and the dump scow control house.

Approved 24-unit First Aid kits are provided at a ratio of 1 to 25. Crewmembers are trained in First Aid for minor injuries. Minor injuries are properly recorded on forms prescribed (located at the First Aid kit). The First Aid Station is designated aboard the equipment.

An approved 24-unit First Aid kit is maintained in the pilothouse of the towboat, crew boat and the control house of each dump scow as well.

3. Fire Protection

Contractor shall comply with all the applicable provisions of the contract and will also take such additional measures as required by the owner's representative. Fire protection equipment, necessary for the safeguarding of all concerned, will be utilized and placed strategically. Fire drills are held regularly to train the dredge crew, but not less than one drill per month.

4. Sanitation

All drinking water will be supplied to the dredge in bottled water containers designated as "fresh drinking water." Drinking water will be dispensed through water coolers on the dredge. Toilet and washing facilities are provided on the dredge. Sleeping quarters are not provided. Housekeeping will be done on a daily basis.

5. Floating Plan and Marine Work

All floating equipment will comply with applicable portions of the contract, as well as U.S. Coast Guard requirements.

- a. A crew landing will be provided and maintained; such location will be determined at the time of equipment mobilization.
- b. Fuel transfer operations will be made in compliance with the U.S. Coast Guard Regulations.
- c. Signal lights shall be displayed as per the requirements of the U.S. Coast Guard (Inland Navigational Rules Act of 1980).

6. Welding and Cutting

All welding and cutting operations will be conducted in accordance with CAL OSHA regulations and the requirements of the contract.

7. Electrical Wiring and Apparatus

All wiring is in accordance with either the requirements of the contract, or the U.S. Coast Guard Requirements for vessels. Ground Fault Circuit Interrupters (GFCI) will be installed and the use will be enforced.

8. Hand and Power Tools

All electric hand tools will be equipped with a positive ground connection. All hand tools are removed from service when damaged and replaced as necessary. All tools will be stowed and handled in accordance with the requirements of the contract. All necessary safety guards such as shields and GFCI on power tools and equipment will be enforced.

9. Pressurized Equipment and Systems

Pressurized equipment and compressed gas cylinders will be inspected, stored and used in accordance with regulations contained in the contract. Caps will be installed on cylinder when not in use.

10. Machinery and Mechanized Equipment

- a. All gears, belts, pulleys, or other rotating or moving parts of equipment are enclosed or guarded.

- b. Approved Rollover Protective Structures (ROPS) will be provided on all dozers, tractors, and front-end loaders. Two-piece seat belts will also be provided, as well as reverse signal alarms.
- c. Pipes, steam lines, and high temperature conductors are insulated or guarded as necessary and shall be label HOT.

11. Ropes, Slings, Chains and Hooks

The use of all ropes, slings, chains, cables, hooks and other rigging shall be done in accordance with the requirements of the contract.

12. Work in Confined Space

- a. No work will be performed in any confined space (holds of vessels, tanks, etc.) until the area has been ventilated and certified by our Project Safety Manager as "Safe for Man - Safe for Work."
- b. Work will be performed in accordance with our Confined Space Operating Procedures.

13. Safe Clearance Procedure

If it becomes necessary to work on or near electrical equipment or lines, mechanical equipment, pressure systems, and vessels and lines, or equipment containing hazardous or dangerous material, a Safe Clearance Procedure will be established.

Extra keys are kept in the tub house on board the dredge. Each key has an identification tag attached, which indicates the location and usage of the key.

Our Lock and Tag Out Procedures are in compliance with CFR 1910.0147 and 8CCR 2320.4, 2527.1, and 3314.

14. Access Facilities

All means of access shall be kept clear of equipment, slippery conditions, obstructions, projections, etc. A safe means of egress will be provided at the boat landing.

15. Noise Control

Where applicable, approved personal protective devices will be furnished in excessive noise areas. All high-noise areas will be appropriately marked.

16. Poisonous and Harmful Substances

- a. When laser equipment is used, appropriate laser warning signs will be posted.
- b. Protection shall be provided shore personnel against snakes.

K. DAILY SAFETY INSPECTIONS:

Daily safety inspections of the work site and equipment will be made by the SSHO to ensure compliance with the safety provisions of the contract.

A written report will be filed with the CQC Manager detailing the safety inspection, safety deficiencies, and measures to be taken to correct the deficiencies, timetable for correction of the deficiencies, the individual responsible for corrective action, and the report of the follow-up safety inspection that everything has been completed.

L. COMMUNICATIONS:

For emergencies there will be a marine radio at the job site. With this the Coast Guard or phone use can be accessed.

M. COMPLIANCE WITH SAFETY REQUIREMENTS:

All safety and accident prevention requirements of this contract will be fully complied with as required by this contract.

N. DIVE PLAN:

Diving Operations are not anticipated on this project. In the event where diving becomes necessary, we will use a Subcontractor, and a full Dive Plan will be submitted. Diving is strictly prohibited until a Dive Plan has been submitted and approved by the Trust.

O. PROFESSIONAL RESPONSE CONTACTS:

A list of doctors, hospitals, ambulance service, fire-rescue, police and Coast Guard telephone numbers will be provided by our Workmen's Compensation carrier prior to the commencement of any project operations.

P. ACTIVITY HAZARD ANALYSIS PLAN

Submitted as attachment A to the HASP

Q. SUBCONTRACTORS:

All subcontractors shall acknowledge this Safety and Accident Prevention Plan prior to conducting any work on this project. Subcontractors that willfully violate or neglect to fully participate in the Safety Plan will be dismissed.

R. SITE SAFETY AND HEALTH OFFICERS (SSHO):

Mr. Mike Johnson, SSHO

Mr. Johnson will be on-site full time. He will be responsible for all safety issues for the duration of this project. He will conduct safety meetings, safety drills, and periodic daily inspections of all equipment and crew. Mr. Johnson's resume and Certificates are attached.

IV. HAZARD COMMUNICATIONS PROCEDURE / PLAN

R.E. Staite's most valued asset is their employees. As such, it is important that you are provided the information and training to work safely. It is our intent and responsibility to provide proper training for the jobs you will be performing. It is the employee's responsibility to use this information to help facilitate safe working practices.

Hazardous chemicals must be treated with respect, and their use proceeded with proper training and employee awareness. What you don't know about chemicals can hurt you. If you have any questions, ask your Supervisor or Site Safety Manager.

It is better to be safe than sorry, so avoid unnecessary exposure to toxic materials. It is very important that all affected employees understand this procedure and the company's goal to conduct safe and professional operations.

A. GENERAL INFORMATION

This written Hazard Communications Program has been implemented by R.E. Staite to comply with all regulatory agencies that oversee our operations. The written program will be available for review at the following locations:

- Safety Director's office in San Diego
- Dredging vessels and crane barges

B. CONTAINER LABELING POLICY

All hazardous substance containers entering company sites will be labeled. Each label will include:

- Container content identification
- Appropriate hazard warnings
- Manufacturer's name and address

Secondary storage containers of hazardous substances not intended for immediate use will also be labeled. However, the manufacturer's name and address are not required on these labels.

The Site Safety Managers will ensure that all containers of hazardous chemicals are labeled correctly and will periodically verify that these labels remain in readable condition.

The Safety Department, with the Purchasing Department's assistance, has the responsibility of making sure all containers of hazardous chemicals entering company property are accompanied by the required written information including MSDS's. The Safety Department also has the responsibility of keeping master MSDS copies and distributing updates to the various sites.

Site Safety Managers will keep MSDS binders under their control - current, available, and in good physical condition.

C. MATERIAL SAFETY DATA SHEETS

R. E. Staite will conduct periodic audits and inventories of hazardous chemicals used by its employees. Material Safety Data Sheets (MSDS) are required for each substance identified by these audits and inventories. The MSDS will then be labeled with an index number, copied, distributed and made available for review by all concerned employees during working hours.

MSDS's will be filed in binders alphabetically by section. These MSDS binders will be kept at main work sites listed above be in good physical condition, and have a master index. The Safety Department will assist Site Safety Managers in keeping the MSDS binders current and in good physical condition.

All employees are required to report any unreadable or missing container labels to their Supervisor. If current MSDS sheets are not available for review, contact your Site Safety Manager so they can take the necessary steps to correct the problem.

D. EMPLOYEE TRAINING AND INFORMATION

The following personnel will be responsible for training on this procedure and all hazardous substances used by this company:

- Safety Department
- Site Safety Managers
- Project Managers

All affected employees will receive training on the following:

- An overview of the requirements set forth by the Federal OSHA "Hazard Communications Standard" (CFR 1910.1200) and California's OSHA Standard (8CCR 5194)
- Hazardous chemicals present in their workplace
- Location and availability of the written Hazard Communication Program and MSDS's
- Physical and health effects of hazardous chemicals
- Monitoring and observation techniques used to detect the presence or release of hazardous chemicals in their work area
- Safe handling procedures including the use of personal protective equipment (PPE)
- Emergency procedures to follow when an exposure occurs
- How to read and understand labels and MSDS's

Each employee will sign an attendance roster that verifies they have received and understood this training. All new employees will be trained in this procedure. Existing employees will be trained in the updated procedure and the training will be updated as changes occur.

E. HAZARDOUS NON-ROUTINE TASKS

In the event an employee is assigned to perform an unusual or non-routine task that may involve exposure to hazardous chemicals, each affected employee(s) will be given a pre-job safety orientation about the chemical hazards involved. The Site Safety Manager will be responsible to conduct this orientation and provide the following information:

- Specific chemical hazards
- Protective/safety measures the employee can take
- Measures the company has taken to lessen the hazard(s) including ventilation, personal protective equipment, and emergency procedures

F. OUTSIDE CONTRACTORS

Prior to outside contractors beginning work on company premises, the Safety Department will ensure that contractors and their employees are provided with the following information:

- Any hazardous chemicals, which they may be exposed to while on the job site
- Precautions the contractor(s) may take to reduce or eliminate exposure by the use of protective measures and equipment

The Project Manager will be responsible for contacting each contractor before work is started to gather information concerning chemical hazards the contractor might bring onto company property. Each contractor will be required to furnish appropriate MSDS's.

G. CHEMICALS IN UNLABELED PIPES

Work activities are sometimes performed by employees in areas where chemicals are transferred through unlabeled pipes. If work is done in these areas, the Project Manager (with help from the Site Safety Manager) will inform employee(s) and contractor(s) assigned to the area about the chemicals being transferred through pipes as well as any potential hazards and safety precautions needed.

Note: Under present Hazard Communication regulations, pipes that transport chemicals are not considered containers and therefore do not have to be labeled.

H. CHEMICAL RELEASE EMERGENCY RESPONSE GUIDELINES

The person reporting the incident should secure the area and start emergency evacuation if warranted. The reporting person should notify senior management as soon as possible after an emergency is detected. Do not go up the chain of command! Start as close to the top as you can. Once notified, senior management and/or incident commander should perform the following steps (not necessarily) in the order listed.

- Assure the scene is secured and no further exposure will or has happened to personnel on site. Have the person reporting the emergency remain on the phone. Find out their telephone number in the event the communications link is broken and you need to call them back. MAINTAIN COMMUNICATIONS with a responsible party on the scene.
- Using another phone (if possible), call your local HazMat team, emergency phone number listed on the MSDS or CHEMTREC @ 1-800-424-9300. Inform them you have a “chemical emergency”. Maintain phone communication with the contacted agency and follow their instructions.
- Have a responsible person at the scene clarify the nature of the emergency and relay the information to the contacted agency. If possible, have your contact find out the following information:
 - Name of chemical, UN number, and trade name(s), if known
 - Amount of chemical(s) involved, if known
 - Types of chemicals involved, i.e., acid, caustic, flammable material, etc.
 - Clarify danger to people, property and environment
 - Locations of any adjacent chemicals that might pose a reactivity problem
 - Status of any evacuation, injured personnel, etc.
- Check the Emergency Response Guidebook and/or MSDS as appropriate for emergency action, protection required, evacuation parameters, etc. Relay this information to the responsible person at the scene for implementation.
- As circumstances allow, notify all concerned agencies (Fire Department, Police, EPA, U.S. Coast Guard, OSHA, etc).
- When the situation has stabilized, and personnel are protected or evacuated, call an environmental or chemical clean-up company to mitigate the site.

I. EMERGENCY STATION DRILL - ABANDON SHIP PLAN / MAN OVERBOARD

Fire Drill Signal

- Continuous sounding of ships whistle and continuous ringing of general alarm for at least 10 seconds.

Abandon Ship

- Six short blasts and one long blast of ship's whistle and the same signal on general alarm.

Dismissal Signal

- Three short blasts on the ship's whistle and the same on the general alarm bells.

Man Overboard

- Hail and Pass the word "MAN OVERBOARD" to the wheelhouse, throw Life-Ring, and keep man in site.

Drill Stations

- Captain
 - ☐ FIRE – On scene / In charge of ALL Operations
 - ☐ ABANDON SHIP – Life Raft Station / In charge of Launching
- Operator:
 - ☐ FIRE – On Deck / In charge / Support Captain
 - ☐ ABANDON SHIP – Operators Cab / In charge / Support Captain
- Mates
 - ☐ FIRE – On Deck / Standby Fire Pump.
 - ☐ ABANDON SHIP

Life Raft Station.

- Deck Hands
 - ☐ FIRE – Man Fire Hoses and Assist as Directed.
 - ☐ ABANDON SHIP – Life Raft Station, Assist with Life Raft.

Additional Crew

- FIRE – Report to Captain / Assist as Directed
- ABANDON SHIP – Report to Life Raft Station and Assist as Directed

DRILLS

Handle all drills as if real situation exists. Life Jackets are to be worn at All Times. The entire crew shall be responsible to familiarize themselves with the location and duties of there emergency station immediately upon reporting aboard.

PROCEDURES IN THE EVENT OF A MAN OVERBOARD

1. THROW A RING BUOY AS COSE TO THE INDIVIDUAL AS POSSIBLE.

2. POST A LOOKOUT TO KEEP WATCH OF THE INDIVIDUAL IN THE WATER. HAVE SOMEONE ON THE VESSAL AS A POINTER FOR THE OPERATOR.
3. IF YOUR VESSAL IS EQUIPPED WITH A GPS PUNCH THE MEMORY BUTTON AS SOON AS POSSIBLE. THIS WILL RECORD THE EXACT POSITION THE MAN WENT OVERBOARD.
4. HAVE A CREW MEMBER PUT ON A LIFEJACKET OR EXPOSURE SUIT, ATTACH A SAFETY LINE TO THE CREWMEMBER AND HAVE HIM/HER STANDBY TO JUMP INTO THE WATER TO ASSIST IN RECOVERING THE INDIVIDUAL IN THE WATER IF NECESSARY.
5. UTILIZE THE RADIO DIRECTION FINDER LOCATED IN THE WHEEL HOUSE TO DIRECT THE BOAT TO THE MAN IN THE WATER.
6. IF THE INDIVIDUAL IS NOT IMMEDIATELY LOCATED, NOTIFY THE COAST GUARD AND OTHER VESSELS IN THE AREA.
7. CONTINUE SEARCHING UNTIL RELEASED BY THE COAST GUARD.
8. ONCE THE INDIVIDUAL HAS BEN RECOVERED FROM THE WATER, ENSURE HE/SHE IS OK AND GET THEM WARMED UP AND DRY AS SOON AS POSSIBLE.
9. TAKE THE INDIVIDUAL TO THE CLOSEST HOSPITAL FOR A CHECK UP, OR CALL FOR EMERGENCY SERVICES IF NEEDED.
10. INFORM YOUR SUPERVISOR AS SOON AS POSSIBLE.

V. HAZARDOUS MATERIAL SPILL RESPONSE PLAN

The following procedure applies to any spill involving hazardous materials, including oil, hydraulic fluid, fuel, etc.

1. Contain spill to prevent spreading and further contamination.

A 450' oil containment boom has been purchased and kept on the dredge for emergency use. The boom is long enough to completely encircle the dredge if required.

2. Immediately notify the RES Safety Manager and your Project Manager:
 - Safety Manager: Mike Johnson 619-247-5413 cell phone
619-233-0178 Office
 - Project Manager: Chad Carpenter 619-520-5350 cell phone
619-233-0178 Office
3. Clean up spill as directed by Safety Manager or Project Manager.
4. Disposal of contaminated waste products as directed by Safety Manager or Project Manager.
5. The Project Manager and Safety Manager are responsible to contact the NASSCO, Coast Guard and other agencies. Barge crew should not call the Coast Guard unless instructed to do so by the Safety Manager or Project Manager.
 - U.S. Coast Guard: VHF Radio Channels 13 or 16.

VI. CONFINED SPACE OPERATING PROCEDURES / PLAN

Definitions

“Confined Space” is an area with the following characteristics:

- Its size and shape allows a person to enter and perform work
- Has limited or restricted means for entry or exit
- Is not designed for continuous occupancy

“Permit required Confined Space” is a space with the following characteristics:

- Contains or has the potential to contain a hazardous atmosphere
- Contains a material that has the potential for engulfing an entrant
- Has an internal configuration such that an entrant could be trapped or asphyxiated by inwardly converging walls or by a floor which slopes downward and tapers to a smaller cross section
- Contains any other recognized serious safety or health hazard

General

RES personnel must receive confined space entry training before conducting confined space operations. Trained personnel must follow the procedures outlined in this section of the Safety and Health Program.

The Confined Space Operating Procedures contain the following elements:

- a. Trained confined space entry teams
- b. Confined space identification
- c. Determining permissibility of entry
- d. Confined space permit preparation
- e. Confined space ventilation
- f. Atmospheric testing
- g. Continuous atmospheric monitoring
- h. Entry supervisor requirements
- i. Entry attendant requirements
- j. Entrant requirements
- k. Retrieval system(s)
- l. Emergency response plans

Procedural Elements

- A. Trained Confined Space Entry Teams:** Entry personnel will receive confined space entry training from the Safety Department or from an approved training course before they can perform duties as a confined space entry team. Confined space entry teams will consist of an Entry Supervisor, Attendant and Entrants.
- B. Confined Space Identification** at job sites and on vessels/barges confined spaces will be clearly identified and marked “CONFINED SPACE DO NOT ENTER”. Identification of confined space is the responsibility of the Site safety Manager at that site with assistance from the Safety Department. All affected employees must be aware of the locations and the hazards associated with each.
- C. Determining Possibility of Entry:** Check the most recent (within 30 days) operational history of the vessel/barge or job site and perform an atmospheric test as outlined in section “F” of this procedure.

Confined space entry by RES personnel is **not allowed** if:

- The operational history indicates the space contains compounds which could produce atmospheric hazards that test equipment cannot identify
- Testing confirms the presence of atmospheric hazards
- The space contains a physical hazard which cannot be eliminated by lock-out/tag-out or other engineering means

(Note: If entry is necessary under adverse conditions, it will be accomplished in accordance with current OSHA regulations by a fully trained and qualified marine chemist or safety/fire/rescue personnel.)

Confined space entry by RES personnel **may be allowed** if:

- The operational history indicates the space did not contain compounds that could produce atmospheric hazards that test equipment cannot identify.
- Testing confirms that an atmospheric hazard does not exist
- The space contained a physical hazard that was eliminated by lock-out/tag-out or other engineering means
- The entry is performed with strict compliance with the RES Confined Space Operating Procedures.

- D. Confined Space Permit Preparation:** A confined space entry permit will be completed by the entry supervisor prior to every entry operation.
- The RES Confined Space Entry Permit must be used for all entries in order to:
 1. Document initial and periodic atmospheric test results
 2. Document accomplishment of an entry team briefing, using the “Entry Team Checklist” provided on the permit
 - The permit (or copy) will be kept at the entry location until the entry operation

is completed.

1. Each permit is valid for the duration of the shift performing the entry, or a maximum of 12 hours (whichever is less). The valid time will be entered on the permit.
2. Initial and periodic atmospheric test results will be recorded on the entry permit. Additional copies of the permit form can be used to document periodic test results as long as these forms are attached to the original entry permit.
3. Permits will be retained in job files and retired to records retention files.

E. Confined Space Ventilation: All confined spaces will be ventilated prior to and during entries.

- **At a minimum**, natural ventilation is required prior to testing and during confined space entry activities that do not introduce atmospheric contaminants (i.e. Inspections).
- Forced air ventilation is required whenever testing detects the presence of an atmospheric hazard. Ventilation will start 15 minutes before entry and continue for the duration of the job.
- Forced air ventilation is required during any activity in which contaminants may be introduced (i.e. hot work, painting, sanding, etc.)
- Forced air ventilation will not take place during initial atmospheric testing.

F. Atmospheric Testing:

- Testing will take place prior to entry (within 30 minutes) of any confined space entry and the test results will be noted on the entry permit.
- Re-testing is required whenever there is a break in confined space operations exceeding 1 hour where the atmospheric conditions of the confined space are not monitored (lunch break, etc).
- RES confined space operations will test for the following, at a minimum:
 1. Oxygen: between 19.5% and 23.5% (the maximum allowable oxygen content allowed is 22.5%)
 2. Lower Explosive Limit (LEL) cannot exceed 10%
- If “hot work” is performed in the confined space, Carbon Monoxide (CO) testing is required. **Allowable CO concentration is 0, none present.**

- Direct reading instruments used should be calibrated according to the manufacturer's directions. The calibration results, the person doing the calibration, and the calibration date should be entered in the calibration log. Zeroing should occur prior to each day's use or more frequently if required by the manufacturer. An instrument should also be re-zeroed if dropped, bumped, etc.
- Confined spaces shall be checked initially from outside the space using a sampling hose and probe, and then internally to detect dead air and pockets of vapors/gases.
- Instrument probes should be held at each location for at least the minimum instrument response time recommended by the manufacturer.
- Instrument readings shall be recorded on the confined space entry permit. Readings will not be averaged, record the reading which poses the greatest exposure. (i.e. oxygen reading below 19.5% or above 22.5%).

G. Continuous Atmospheric Monitoring: Is required for all confined space operations.

- Activities which do not introduce atmospheric contaminants (interior inspections) require the use of personal Oxygen monitors with alarms.
- Activities which introduce atmospheric contaminants (i.e. hot work, rust removal, etc) require both:
 1. External monitors with alarms
 2. Internal monitors with alarms (individual and group devices) located where personnel are performing work

H. Entry Supervisor Requirements: A trained Entry Supervisor will be designated for each entry. An Entry Supervisor can also perform the duties of the Entry Attendant.

The responsibilities of the Entry Supervisor include:

- Ensuring the overall safety of Entry Attendants and Entrants
- Ensuring all members of the Entry Team are qualified and adequately briefed on:
 1. The duration of the entry permit
 2. The duties of the entry team
 3. The job requirements for the confined space (use the AHA)
 4. Results of atmospheric testing and requirements for periodic testing
 5. Hazardous of the confined space to be entered
 6. Entry/egress equipment to be used
 7. The emergency response/rescue plan for entry

- Ensure the confined space entry permit form has been properly completed
- Authorizing the entry by signing the confined space entry permit
- Retaining a copy of the permit in the “job file”

I. Entry Attendant Requirements: At least one trained entry attendant will be assigned for each entry job. The responsibilities of the attendant include:

- Performing no duties that interfere with Entry Attendant responsibilities
- Remaining **at their post** outside the confined space at all times unless relieved by another qualified attendant or all entry personnel have exited the confined space.
- Knowing the hazards of the confined space and their effects on entrants
- Verifying entry permit information
- Maintaining an accurate count of entry personnel
- Helping direct activities of entry personnel
- Maintaining voice/radio communication with entry personnel
- Ensuring security of the entry area and prevent unauthorized entry
- Initiating emergency evacuation, notification and rescue
- Monitoring confined space atmospheric conditions
- Directing and assisting operation of retrieval systems

J. Entrant Requirements: Trained entrants will be assigned for every entry. The responsibility of Entrants include:

- Knowing the job requirements and hazards of entry

- Using prescribed entry equipment
- Maintaining voice/radio communication with the Entry Attendant
- Alert Entry Attendant should there be a problem
- Following the directions of the Entry Supervisor and Entry Attendant
- Exiting the confined space when something goes wrong, or when directed to by the Entry Attendant or Entry Supervisor and complying with approved rescue plan

K. Fall Arrest/Retrieval System(s): Must be in place for each confined space entry and capable of extracting an incapacitated worker.

L. Emergency Response Plan(s): The Entry Supervisor must brief all entry personnel, Attendants, and support personnel on the dedicated emergency response plan(s). These plan(s) will include:

- Emergency notification procedures
- First Aid/CPR response procedures
- Medical response process
- Retrieval Process
- Location of MSDS information

ADDITIONAL REQUIREMENTS: A job hazard analysis **must be conducted** for each confined space operation to determine other safety engineering, administrative, and Personal Protective Equipment (PPE) requirements (i.e. respiratory, hearing, fall, heat protection, lighting, etc). The Confined Space Entry Permit can be used as a guide in conducting the Job Hazard Analysis.

M. Acknowledgement

I _____, hereby acknowledge that I have read, understood, and agree to abide by the safety standards as set forth by this manual as a condition of my employment with R.E. Staite Engineering, Inc. Willful violators of the safety standards and principles covered in this manual may be grounds for dismissal.

Date:_____

Signature:_____